

### **REMARKS**

Applicant wishes to thank the Examiner for the notice of allowable subject matter. Applicant has amended claims 1, 5, and 15 of the application. As requested by the Examiner, claim 5 is amended to delete the words “small” and “lightweight.” Claim 5 is also amended to replace the word “elements” with “LED light source, the pair of collimating lenses, and the fiber optic rod.” Claim 14 is cancelled. Claim 15 is amended to change the dependency of said claim from the cancelled claim 14 to claim 5. These amendments to claims 5 and 15 and the cancellation of claim 14 overcome the objections to claims 5 and 12-16 so that said claims are placed in condition for allowance. Applicant respectfully requests that the Examiner withdraw the objections and allow said claims.

#### **I. REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

Applicant respectfully traverses the Examiner’s rejection of claims 5 and 12-16 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements. Applicant has amended claim 5 to include a power source as requested by the Examiner. Applicant has also added new claim 17 to claim and disclose that the power source is variable. This amendment places said claims in condition for allowance. Applicant respectfully requests that the Examiner withdraw the rejection and allow said claims.

#### **II. REJECTIONS UNDER 35 U.S.C. § 103(a)**

##### **A. REJECTION OF CLAIMS 1, 2, 4, 6, 8, AND 9**

Applicant respectfully traverses the Examiner’s rejection of claims 1, 2, 4, 6, 8, and 9 under 35 U.S.C. § 103(a) as being unpatentable over Springer, U.S. Patent No. 2,893,379,

in view of Yamashita, U.S. Patent No. 4,599,537, Lilly, U.S. Patent No. 3,461,346, and Lagerway et al., U.S. Patent No. 5,774,271. Applicant's invention differs markedly from the invention described by the Springer reference in several aspects. First, as stated by the Examiner on page 3 of the Office Action, "Springer does not disclose an LED or a fiber optic rod or a variable electric power source or a lens in direct communication with the fiber optic rod." The Examiner also states that "Yamashita discloses an LED light source (reference number 1) and a fiber optic rod (reference number 31) disposed adjacent and abutting the LED light source (Fig. 6)." Figure 6 of the Yamashita reference does not show an LED light source and a fiber optic rod disposed adjacent to and abutting the LED light source. Rather, Figure 6 illustrates a light emitting diode (1) molded into and embedded within a transparent semi-spherical resin (4). A ring-shaped infrared/visible conversion fluorescent element (6) covers the peripheral portion of the direction of the Y optical axis, which is indicated by a horizontal arrow pointing from the LED (1) in Yamashita to the fluorescent element (6). The fluorescent element (6) is in direct connection with one end of the optical fiber 31. Figure 6 of Yamashita clearly illustrates a gap or space between the LED (1) and the end of the optical fiber (31) of that invention. The gap or space is slightly obscured in the drawing by the short horizontal arrow indicating the Y optical axis.

Applicant has amended claim 1 of the present application to claim and disclose that the fiber optic rod of Applicant's invention is "disposed directly adjacent to and abutting against said LED light source." See Figure 2 of the present application. Unlike the Yamashita invention, no gap or space is present between the fiber optic rod and LED light source of Applicant's invention. This arrangement differs significantly from the

configuration illustrated and claimed in Yamashita and the other references. For this reason, the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw the rejection and allow said claim.

With respect to the Lagerway reference, the Lagerway light is mounted in a separate housing far from the head-mounted light housing and requires an extensively long fiber optic cable from the light source. Applicant's LED light source is inside the mounted housing and, therefore, provides lightweight but high-intensity light at the distal opening of the headlight. This combination is not disclosed in Lagerway. Instead, the Lagerway reference teaches a complex headlamp assembly having a condensing lens group disposed in a separate box far away from the housing mounted on the doctor's head.

As illustrated in Figure 2, Applicant claims and discloses a fiber optic rod having a proximal end that is directly adjacent to and abutting against (or otherwise in physical contact with) the LED light source. See Applicant's application, claim 1 and Figure 2. None of the references relied upon by the Examiner claim or describe this novel feature of Applicant's invention. The Lagerway reference does not disclose a fiber optic rod abutting in physical contact against a light source. Thus, this novel feature of the Applicant's invention distinguishes Applicant's invention from the invention disclosed in the reference.

Finally, as illustrated in Figure 2, Applicant claims that the distal end of the fiber optic rod is both in direct optical communication (see amended claim 1) and in direct physical contact with (see claims 10 and 15) the first collimating lens. This novel feature is clearly and distinctly shown in Figure 2 of the current application. Column 3, lines 54-62,

of Lagerway discloses a pair of adjacent optical elements that are mounted within a housing “adjacent the distal end of the fiber optic cable bundle 19.” The word “adjacent” is defined as “situated near or next.” See The Merriam-Webster Dictionary, 1998. Figure 3 of Lagerway illustrates two optical elements (42) and (44) that are situated near one another, however, said optical elements are not in physical contact with one another. Similarly, Figure 3 of Lagerway also shows a fiber optic cable bundle (19) that is situated near optical element (42) but does not communicate in physical contact with said optical element (42). Lagerway shows and describes a fiber optic cable bundle (19) that is adjacent, or situated near, to optical element (42), however, said fiber optic cable bundle terminates inside the cavity holding optical elements (42) and (44) without ever physically contacting either of those optical elements. Applicant’s invention is patentably different from the invention disclosed in Lagerway where Applicant’s fiber optic rod physically contacts a first collimating lens while Lagerway’s fiber optic cable bundle is situated merely near to (but terminating before physical contact with) the optical element 42 of that invention. For these reasons, the Examiner’s rejection of claim 1 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw the rejection and allow said claim.

Dependent claims 2, 4, 6, 8, and 9 ultimately depend upon amended independent claim 1, and thus, include all of the elements and limitations of independent claim 1, which are not claimed by the Examiner’s cited references. 35 U.S.C. § 112, fourth paragraph. Therefore, the Examiner’s rejection of Applicant’s claims 1, 2, 4, 6, 8, and 9 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner

withdraw this rejection and allow said claims.

**B. REJECTION OF CLAIM 3**

The Examiner's rejection of claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Springer, U.S. Patent No. 2,893,379, in view of Yamashita, U.S. Patent No. 4,599,537, Lilly, U.S. Patent No. 3,461,346, and Lagerway et al., U.S. Patent No. 5,774,271, as applied to claim 1, and in further view of Wong et al., U.S. Patent No. 6,390,640, and Gonser et al., U.S. Patent No. 5,003,434, is respectfully traversed. Dependent claim 3 ultimately depends upon amended independent claim 1, and thus, includes all of the elements and limitations of independent claim 1, which are not claimed by the Examiner's cited references. 35 U.S.C. § 112, fourth paragraph. This includes the novel and unobvious element disclosed in Applicant's amended claim 1 of "a fiber optic rod disposed directly adjacent to and abutting against said LED light source." For this reason, the Examiner's rejection of claim 3 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw the rejection and allow claim 3.

**C. REJECTION OF CLAIMS 5, 12, AND 14**

Applicant respectfully traverses the Examiner's rejection of claims 5, 12, and 14 under 35 U.S.C. § 103(a) as being unpatentable over Springer, U.S. Patent No. 2,893,379, in view of Yamashita, U.S. Patent No. 4,599,537, and Lagerway et al., U.S. Patent No. 5,774,271. As previously stated in this Amendment, the Yamashita reference does not show an LED light source and a fiber optic rod disposed adjacent to and abutting the LED light source. Rather, Figure 6 of Yamashita illustrates a light emitting diode (1) molded into and embedded within a transparent semi-spherical resin (4). A ring-shaped

infrared/visible conversion fluorescent element (6) covers the peripheral portion of the direction of the Y optical axis, which is indicated by a horizontal arrow pointing from the LED (1) in Yamashita to the fluorescent element (6). The fluorescent element (6) is in direct connection with one end of the optical fiber 31. Figure 6 of Yamashita clearly illustrates a gap or space between the LED (1) and the end of the optical fiber (31) of that invention. The gap or space is slightly obscured in the drawing by the short horizontal arrow indicating the Y optical axis.

Applicant has amended claim 5 of the present application to claim and disclose “an LED light source in direct physical contact with and abutting against a fiber optic rod that forms a direct light optical channel.” See Figure 2 and amended claim 5 of the present application. Unlike the Yamashita invention, no gap or space is present between the fiber optic rod and LED light source of Applicant’s invention. This arrangement differs significantly from the configuration illustrated and claimed in Yamashita and the other references. For this reason, the Examiner’s rejection of claim 5 under 35 U.S.C. § 103(a) cannot be sustained. Applicant respectfully requests that the Examiner withdraw the rejection and allow said claim.

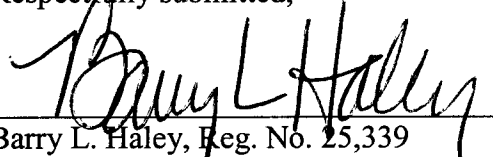
Dependent claim 12 ultimately depends upon amended independent claim 5, and thus, includes all of the elements and limitations of independent claim 5, which are not claimed by the Examiner’s cited references. 35 U.S.C. § 112, fourth paragraph. This includes the novel and unobvious feature of the “LED light source in direct physical contact with and abutting against a fiber optic rod that forms a direct light optical channel.” Claim 14 has been cancelled pursuant to the Examiner’s request. Therefore, the

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Examiner's rejection of Applicant's claim 12 under 35 U.S.C. § 103(a) cannot be sustained.  
Applicant respectfully requests that the Examiner withdraw this rejection and allow said claim.

If there are any additional charges, including extension of time, please bill our  
Deposit Account No. 13-1130.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Barry L. Haley", is written over a horizontal line.

Barry L. Haley, Reg. No. 25,339  
James David Johnson, Reg. No. 47,685  
Malin, Haley & DiMaggio, P.A.  
1936 South Andrews Avenue  
Fort Lauderdale, FL 33316  
Tel: (954) 763-3303  
Fax: (954) 522-6507  
E-Mail: INFO@mhdpatents.com